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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,753	12/04/2003	Johann Meseth	TER-02P0020	7612

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EXAMINER
GREENE, DANIEL LAWSON

ART UNIT	PAPER NUMBER
3663	

DATE MAILED: 06/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/727,753	MESETH, JOHANN	
	Examiner	Art Unit	
	Daniel L. Greene Jr.	3663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 April 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 3-5* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 3-5* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/27/2006 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

4. Claim 5 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 5 includes the phrase "wherein a portion of said condensation tube is embedded in a wall" (underlining added). The limitation "a portion of" is

considered new matter in that it is not seen wherein the specification uses such a phrase. Additionally it is noted that applicant's specification page 6 lines 24+ and page 15 lines 10-13 state "a significant part of the condensation tube" which clearly does not connote the same meaning as "a portion". Again, this is a new matter rejection.

5. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "portion" in claim 5 is a relative term, which renders the claim indefinite. The term "portion" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. See the discussion of this topic in section 4 above.

Claim 5 is vague, indefinite and incomplete in what all is meant by and encompassed by the phrase "a portion of" because it is not seen wherein the specification uses such a term. Accordingly the metes and bounds of the claim are undefined. See the discussion of this topic in section 4 above.

Claim 1 is vague, indefinite and incomplete in what all is meant by and encompassed by the phrase "said condensation tube being formed with an elbow leading into an outlet nozzle" because the claim does not disclose whether the elbow is an integral part of the condensation tube or whether the nozzle is an

integral part of the elbow. Further the claim fails to disclose whether the lower end of the elbow is considered to be the nozzle or some other part. Figure 2 appears to indicate an integral condensation tube, elbow, nozzle combination however Figure 1 appears to indicate separate components. Further the claim fails to disclose how and in what manner the elbow **leads into** an outlet nozzle. Since the current claim language allows for multiple interpretations the metes and bounds of the claim are undefined.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 4,036,291 to Kobayashi et al.

Kobayashi discloses a containment (inherently capable of being used for a nuclear power plant) comprising:

a containment structure (22) having formed therein a pressure chamber and a condensation chamber (10) with a base, said condensation chamber having a cooling liquid (40) therein, the cooling liquid having a surface defining a horizontal;

a vertical condensation tube (32) having an upper end (36) communicating with said pressure chamber and a lower end immersed in the cooling liquid in said condensation chamber;

said lower end of said condensation tube being formed with an elbow leading into an outlet nozzle;

said elbow having an elbow angle causing a lower end of said elbow to be immersed obliquely with respect to the horizontal; and

said outlet nozzle of said condensation tube being formed by a tube section having a lower side proximal to said base of said condensation chamber and an upper side distal from said base, said lower side being longer than said upper side in, for example, figure 7, column 1 lines 8-27, column 4 lines 52+, column 5 lines 60+, etc.

Figure 7 appears to indicate that the elbow angle of said elbow of said condensation tube is between 70 degrees and 85 degrees.

As to limitations which are considered to be *inherent* in a reference, note the case law *In re Ludtke*, 169 USPQ 563, *In re Swinehart*, 169 USPQ 226, *In re Fitzgerald*, 205 USPQ 594, *In re Best et al*, 195 USPQ 430, and *In re Brown*, 173 USPQ 685,688.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

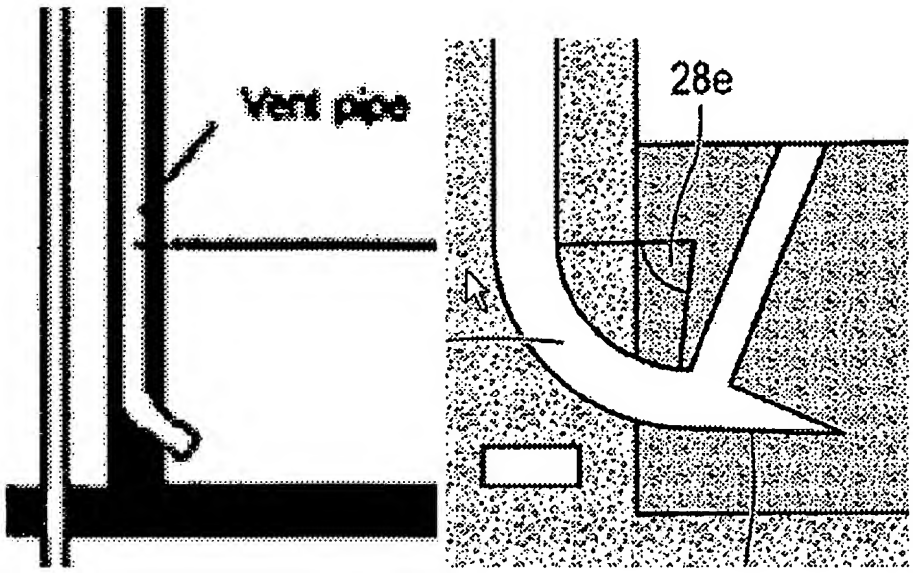
7. Claims 1, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krebs Figure 4 in view of U.S. Patent 4,986,956 to Garabedian for the reasons set forth in section 5 of the Final Office action mailed 11/29/2005. (reproduced herein for applicant's convenience) as further explained below.

Applicant's arguments filed 2/27/06 have been fully considered but they are not persuasive.

Applicant's arguments are unpersuasive as applicant has not shown that the references do not teach what the examiner has stated they teach, nor has applicant shown that the examiner's reasoning for and manner of combining the teachings of the references is improper or invalid.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Please review the enlarged sections of Krebs and Applicant's Figure 2 regarding applicant's arguments that Krebs does not disclose an elbow.



It is noted that applicant appears to indicate that said elbow is actually a curved pipe bend (page 7 of 9 first paragraph, last sentence), which appears to imply that the elbow is integral with the pipe as Krebs also appears integral. Claims 1 and 3 also appear to indicate that the elbow is an integral part of the condensation tube because it is stated "said condensation tube being formed with an elbow" which implies it is the tube that is formed with an elbow, not that an elbow is attached to the tube. While the elbow of Krebs may appear to be integral (same as applicant's Figure 2) making separable is within the skill of one having ordinary skill in the art. See In re Dulberg, 289 F.2d 522, 523, 129 USPQ 348, 349 (CCPA 1961). As applied here it would appear that if it were considered to be desirable for any reason to replace the nozzle or elbow due to corrosion, mechanical damage, etc. it would have been obvious to make the elbow and nozzle separable for that purpose.

That said, Krebs clearly discloses applicant's invention as claimed except for the specific geometry of the outlet nozzle.

Garabedian column 6, lines 11-15 teach is it old and advantageous to cut the angle of the outlet nozzle at a 45 degree angle for the benefit of eliminating major hydrodynamic pressure disturbances due to a chugging type of steam condensation.

At the time of the invention it would have been obvious to one of ordinary skill in the art to modify the outlet nozzle of Krebs with a 45 degree angle thereby providing an outlet nozzle formed with a lower side longer than the upper side, for the benefit of eliminating major hydrodynamic pressure disturbances due to a chugging type of steam condensation as shown to be old and advantageous by the teachings of Garabedian above.

Additionally, it would have also been obvious to one having ordinary skill in the art at the time the invention was made to vary the angle of the outlet nozzle in order to achieve a desired result, i.e. less chugging, as it is well-settled that optimizing a result effective variable is well within the expected ability of a person of ordinary skill in the subject art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980), In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1955).

8. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krebs Figure 4 in view of U.S. Patent 4,986,956 to Garabedian as applied to claims 1 and 5 above and further in view of either Introduction to Fluid Mechanics

second edition to John et al. or Piping Handbook Seventh edition to Nayyer for the reasons set forth in section 6 of the Final Office action mailed 11/29/2005. (reproduced herein for applicant's convenience)

The combination of Krebs in view of Garabedian discloses applicant's invention as claimed, however there is no express disclosure of the specific angle of the elbow of the condensation tube.

Both John et al. (ppB.374, C.494 and C.495) and Nayyer (pp 174) teach it is old and advantageous to minimize the curvature of a pipe or elbow for the benefit of minimizing friction and subsequent losses in the flow of liquid in the system. John et al. and Nayyer disclose fundamentals behind standard fluid flow in pipes, systems, etc. that are considered to be basic knowledge to those in the nuclear containment art.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to vary the angle of the elbow of the combination of Krebs and Garabedian to those angles suggested in claims 3 and 4 for the benefits of decreasing the loss coefficient and minimizing pressure losses as taught to be old and advantageous by either John et al. or Nayyer.

Additionally it would have been obvious to one having ordinary skill in the art at the time the invention was made to vary the angle of the elbow of the combination of Krebs and Garabedian within the range suggested by claims 3 and 4 to achieve a desired result as it is well-settled that optimizing a result effective variable is well within the expected ability of a person of ordinary skill in

the subject art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980), In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1955).

9. **Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi as applied to claims 1 and 3 above and further in view of either Introduction to Fluid Mechanics second edition to John et al. or Piping Handbook Seventh edition to Nayyer.**

Kobayashi discloses applicant's invention as explained above, however there does not appear to be an express disclosure of the specific angle of the elbow of the condensation tube.

Both John et al. (ppB.374, C.494 and C.495) and Nayyer (pp 174) teach it is old and advantageous to minimize the curvature of a pipe or elbow for the benefit of minimizing friction and subsequent losses in the flow of liquid in the system. John et al. and Nayyer disclose fundamentals behind standard fluid flow in pipes, systems, etc. that are considered to be basic knowledge to those in the nuclear containment art.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to vary the angle of the elbow of the combination of Krebs and Garabedian to those angles suggested in claims 3 and 4 for the benefits of decreasing the loss coefficient and minimizing pressure losses as taught to be old and advantageous by either John et al. or Nayyer.

Additionally it would have been obvious to one having ordinary skill in the art at the time the invention was made to vary the angle of the elbow of the combination of Krebs and Garabedian within the range suggested by claims 3 and 4 to achieve a desired result as it is well-settled that optimizing a result effective variable is well within the expected ability of a person of ordinary skill in the subject art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980), In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1955).

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel L. Greene Jr. whose telephone number is (571) 272-6876. The examiner can normally be reached on Mon-Fri 8:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Keith can be reached on (571) 272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DIG
2006-06-08

JACK KEITH
SUPERVISORY PATENT EXAMINER